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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/431,699	11/01/1999	CARL G. DEMARCKEN	09765/016001	9097

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EXAMINER

KAPADIA, MILAN S

ART UNIT

PAPER NUMBER

3626

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4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/431,699

Applicant(s)

DEMARCKEN, CARL G.

Examiner

Milan S Kapadia

Art Unit

3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 11/01/1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/01/1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Notice to Applicant

1. This communication is in response to the application filed 01 November 1999.
Claims 1-24 are pending.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 21-25 been renumbered to 20-24.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "21c" on page 4, line 16. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 3626

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by DeMarcken (6,377,932).

(A) As per claim 1, DeMarcken discloses a method for rules validation for a travel

Art Unit: 3626

planning system comprising:

reducing a larger set of travel options to a smaller set of diverse travel options.

(DeMarcken; col. 48, lines 54-67 and fig. 18; the examiner interprets the "pricing graph" as "a larger set of travel options" and the "extracted pricing solutions" as a "smaller set of diverse travel options.")

(B) As per claim 2, DeMarcken discloses generating one or more travel options consistent for each of a diversity of travel requirements (DeMarcken; col. 49, lines 31-58).

(C) As per claim 3, DeMarcken discloses generating one or more desired travel options consistent with a diversity of travel requirements (DeMarcken; col. 49, lines 31-58)

(D) As per claim 4, DeMarcken discloses generating one or more of the best travel options consistent with a diversity of travel requirements where the travel requirements are dependent on the original set of travel options (DeMarcken; col. 49, lines 42-58; it is respectfully, that criteria like "a value function can specify a minimum value of some value over the set of pricing solutions that involve a particular node" is a form of "travel requirements which are dependent on the original set of travel options.")

(E) As per claim 5, DeMarcken discloses the set of travel requirements includes

Art Unit: 3626

requirements for different airlines (DeMarcken; col. 49, lines 53-58).

(F) As per claim 6, DeMarcken discloses the set of travel requirements includes requirements for travel times of day, travel dates class (DeMarcken; col. 59, lines 29-46 and fig. 22; the examiner understands the itinerary to comprise of both times of day and travel dates), numbers of stops class (DeMarcken; col. 58, lines 60-63), arrival or departure airports class (DeMarcken; col. 59, lines 5-7), and cabin class (DeMarcken; col. 59, lines 2-4).

(G) As per claim 7, DeMarcken discloses the set of travel requirements includes requirements that are combinations of other requirements (DeMarcken; col. 49, lines 53-58; the examiner interprets applying the requirements to a subset of the pricing graph, therefore applying multiple requirements to the original pricing graph, as a form of "requirements that are combinations of other requirements.").

(H) As per claim 8, DeMarcken discloses the set of travel requirement combinations include outbound and return travel dates or times of day (DeMarcken; col. 60, lines 6-15).

(I) As per claim 9, DeMarcken discloses the set of travel requirement combinations include airlines and number of stops, arrival and departure airports (DeMarcken; col. 58, lines 60-63 and col. 60, lines 16-24).

(J) As per claim 10, DeMarcken discloses generating one or more travel options that are best for each of a set of travel preference functions (DeMarcken; col. 49, lines 42-67).

(K) As per claim 11, DeMarcken discloses the travel preference functions include functions that optimize cost or functions that optimize convenience (DeMarcken; col. 49, lines 42-67).

(L) As per claim 12, DeMarcken discloses the travel preference functions include both functions that optimize cost and functions that optimize convenience and functions that optimize combinations of cost and convenience (DeMarcken; col. 49, lines 42-67).

(M) Claim 21 is the corresponding system claim to method claim 1 and therefore is rejected for the same reasons given above in the rejection of claim 1 and incorporated herein

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3626

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMarcken et al (6,377,932) in view of Webber et al. (5, 331, 546).

(A) As per claim 13, DeMarcken teaches sorting the list of travel options Ts by an ordering function F to produce a best-first ordered list Ts2 with the list of options being optimized travel options for a set of travel requirements R in accordance with the ordering function F (DeMarcken; col. 49, lines 59-67).

However, DeMarcken fails to expressly teach generating a prioritized ordered list of requirements but does teach applying the requirements in a specific order (DeMarcken; col. 49, lines 41-42). However, this feature is old and well known in the art, as evidenced by Webber's teachings with regards to generating a prioritized ordered list of requirements to be applied to a set of travel options (Webber; fig. 4A; the examiner interprets requirements like items 60, 62, and 66 in fig. 4A as a "prioritized list of requirements."). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the system taught by DeMarcken with Webber's teaching with regard to generating a prioritized list of requirements, with the motivation of taking into account details of a preset corporate travel policy, as well as individual travel preferences, such as the trade-offs between ticket prices and travel time (Webber; col. 2, lines 36-41).

(B) As per claim 14, DeMarcken fails to expressly disclose initializing the list of result travel options RTs to be empty; and if the remaining list of requirements Rs is empty, returning an ordered list of diverse travel options Rts. However, this feature is old and well known in the art, as evidenced by Webber's teachings with regards to initializing the list of result travel options RTs to be empty; and if the remaining list of requirements Rs is empty, returning an ordered list of diverse travel options Rts (Webber; col. 8, lines 35-50, fig. 6A, and fig. 6B; it is respectfully submitted, that if the resulting travel options list is empty after testing a requirement, then the list of result travel options has been initialized to be empty; the examiner interprets "save as one of the six best preference itineraries," item 234 of fig. 6A, as occurring after determining that the "remaining list of requirements is empty" and interprets "sort the selected itineraries by departure time and display them and their best fares to the travel arranger" as "returning an ordered list of diverse travel options."). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the system taught by DeMarcken with Webber's teachings with regards to initializing the list of result travel options RTs to be empty; and if the remaining list of requirements Rs is empty, returning an ordered list of diverse travel options Rts, with the motivation of rapidly sifting through what may be thousands of currently available flights, fares and rules for a given trip and to find the lowest fare for which the particular traveler and trip qualify and for which seats are available (Webber; col. 4, lines 25-34).

(C) As per claim 15, the collective system of DeMarcken and Webber teach

Art Unit: 3626

initializing the list of result travel options RTs to be empty as shown above in the rejection of claim 14, and therefore incorporated herein. The combined system of DeMarcken and Webber, collectively also teach if the remaining list of requirements Rs is not empty, selecting a first travel requirement R from the ordered list of requirements (Rs) (Webber; fig. 6A; the examiner interprets selecting requirements, like items 226 and 228 of fig. 6A, as "selecting a first travel requirement from the ordered list of requirements if the remaining list of requirement is not empty.")

However, the combined system of DeMarcken and Webber, collectively fail to teach removing a requirement R from the requirement list (Rs). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the collective system taught by DeMarcken and Webber to remove the requirement from the list, with the motivation ensuring a particular requirement is not applied multiple times.

(D) As per claims 16 and 17, DeMarcken fails to expressly disclose finding a first option T in a best-first ordered list (Ts2) that satisfies travel requirement R and determining whether any option in the Ts2 satisfies the travel requirement. However, this feature is old and well known in the art, as evidenced by Webber's teachings with regards to finding a first option T in a best-first ordered list (Ts2) that satisfies travel requirement R and determining whether any option in the Ts2 satisfies the travel requirement (Webber; fig. 2; the examiner interprets "select itineraries with available seats and lowest valid fares" as "finding a first option that satisfies travel requirements"

Art Unit: 3626

and interprets "select only confirming itineraries" as "determining whether an options satisfies travel requirement.") It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the system taught by DeMarcken with Webber's teachings with regards to finding a first option T in a best-first ordered list (Ts2) that satisfies travel requirement R and determining whether any option in the Ts2 satisfies the travel requirement, with the motivation of rapidly sifting through what may be thousands of currently available flights, fares and rules for a given trip and to find the lowest fare for which the particular traveler and trip qualify and for which seats are available (Webber; col. 4, lines 25-34).

(E) As per claim 18, DeMarcken fails to expressly disclose if no option in Ts2 satisfies R, the method further comprises: checking if the remaining list of requirements Rs is empty. However, this feature is old and well known in the art, as evidenced by Webber's teachings with regards to checking if the remaining list of requirements Rs is empty if no option in Ts2 satisfies R (Webber; col. 8, lines 25-40). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the system taught by DeMarcken with Webber's teachings with regards to checking if the remaining list of requirements Rs is empty if no option in Ts2 satisfies R, with the motivation of rapidly sifting through what may be thousands of currently available flights, fares and rules for a given trip and to find the lowest fare for which the particular traveler and trip qualify and for which seats are available (Webber; col. 4, lines 25-34).

(F) As per claim 19, the collective system of DeMarcken and Webber teach determining if the size of the travel option list RTs is equal to or greater than N the process in order to return the ordered list of diverse travel options (Webber; col. 15, lines 7-17).

However, the combined system of DeMarcken and Webber collectively fail to teach after determining if a travel option T is not already in the result list Rts, adding the travel option T to end of the result travel option list Rts. It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the collective system taught by DeMarcken and Webber to determine if a travel option T is not already in the result list Rts and adding the travel option T to end of the result travel option list Rts, with the motivation ensuring a particular travel option does not show up multiple times in the travel option result list.

(G) As per claim 20, the combined system of DeMarcken and Webber, collectively fail to teach determining for each travel requirement R2 in Rs, whether the requirement R2 includes a requirement R, and T satisfies R2, and if T satisfies R2; removing R2 from Rs. It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the collective system taught by DeMarcken and Webber to determine for each travel requirement R2 in Rs, whether the requirement R2 includes a requirement R, and T satisfies R2, and if T satisfies R2; removing R2 from Rs, with the motivation improving the speed of the

Art Unit: 3626

system by by-passing the application of a requirement that is a subset of an already applied requirement.

(H) Claims 22-24 are the corresponding system claims to method claims 13-15 and therefore are rejected for the same reasons given above in the rejections of claims 13-15 and incorporated herein.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited but not applied art teaches a computer reservation system with means to rank travel itineraries chosen in terms of schedule/fare data (4,862,357); an automatic travel service management information system (5,832,451); and a self-service system for selling travel-related services or products (5,732,398).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Milan S Kapadia whose telephone number is 703-305-3887. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 703-305-9588. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

Art Unit: 3626

746-7238 for regular communications and 703-746-7239 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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May 3, 2002


JOSEPH THOMAS
SUPERVISORY PATENT EXAMINER
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